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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR    | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-------------------------|---------------------|------------------|
| 10/719,515      | 11/20/2003  | James Clifford Anderson | 200309574-1         | 3020             |

22879 7590 08/29/2006

HEWLETT PACKARD COMPANY  
P O BOX 272400, 3404 E. HARMONY ROAD  
INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER

OLSON, JASON C

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2627

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/719,515 | <b>Applicant(s)</b><br>ANDERSON ET AL. |  |
|                              | <b>Examiner</b><br>Jason C. Olson    | <b>Art Unit</b><br>2627                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8, 10-12, 17, 19-21, 26, 28-30 and 35 is/are rejected.
- 7) ☒ Claim(s) 4-7, 9, 13-16, 18, 22-25, 27, 31-34 and 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This office action is in response to arguments filed on 7/03/2006.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 8, 10-12, 17, 19-21, 26, 28-30, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chliwnyj et al. (US 5,828,514), hereafter Chliwnyj and Nagasawa (US 6,449,114).

Regarding claims 1-3, Chliwnyj teaches receiving data when operating in a write mode (see col. 5, ln. 22-42; the channel receives data when data is to be written the magnetic tape); passing magnetic tape across an electromagnetic head (see col. 5, ln. 24-30); varying drive current to the electromagnetic head according to the data when operating in a write mode (see col. 5, ln. 22-42; the drive current is varied according to the data that is written to the tape); sensing current induced in the electromagnetic head when operating in a read mode (see col. 5, ln. 22-42; current induced during reading is sensed in the head); adjusting position of the electromagnetic head according to a sensed movement signal (see col. 10, ln. 55-66); generating a correction signal based on sensed movement information (see col. 9, ln. 32-36); and positioning the electromagnetic head according to the correction signal (see col. 9, ln. 36-40). Chliwnyj fails to teach sensing vibration imparted to a tape transport mechanism and generating

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an electrical signal according to the vibration experienced by a tape transport mechanism, however Nagasawa is relied upon to teach sensing vibration imparted to a tape transport mechanism (see col. 4, ln. 22-28 and figures 1 and 2, item 13) and generating an electrical signal according to the vibration experienced by a tape transport mechanism (see col. 4, ln. 29-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon controlling the position of the head based on a signal from a sensor of Chliwnyj by applying the teaching of sensing vibration in the tape mechanism and outputting an acceleration signal as taught by Nagasawa for the purpose of controlling the head to curtail the effects of the vibration to protect adjacent data and guarantee written data as stated in column 5, lines 47-51 by Nagasawa.

Regarding claim 8, the combination of Chliwnyj and Nagasawa teach sensing a position of the magnetic tape relative to the electromagnetic head (see col. 8, ln. 15-21 of Chliwnyj); and adjusting the position of the electromagnetic head according to the sensed position of the magnetic tape (see col. 8, ln. 21-27 of Chliwnyj).

Regarding claims 10-12 and 17: Apparatus claims 10-12 and 17 are drawn to the apparatus corresponding to the method of using same as claimed in claims 1-3 and 8. Therefore apparatus claims 10-12 and 17 correspond to method claims 1-3 and 8, and are rejected for the same reasons of anticipation as used above.

Regarding claims 19-21, 26, 28-30, and 35: claims 19-21, 26, 28-30, and 35 have limitations similar to those treated in the above rejection(s), and are met by the references as discussed above. Claims 19 and 20 however also recites the following limitations as taught by the combination of Chliwnyj and Nagasawa: accelerometer, wherein the accelerometer is

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attached to the tape transport mechanism (see figures 1 and 2, item 13, the shock sensor is an accelerometer and is attached to the tape transport mechanism). It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon controlling the position of the head based on a signal from a sensor of Chliwnyj by applying the teaching of sensing vibration in the tape mechanism with an accelerometer and outputting an acceleration signal as taught by Nagasawa for the purpose as stated in claim 1.

***Allowable Subject Matter***

Claims 4-7, 9, 13-16, 18, 22-25, 27, 31-34, and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to teach alone or in combination vibration limiter capable of limiting vibration frequencies of a chassis whereon the electromagnetic head is mounted in accordance with the frequency response of head positioning; vibration signal receiver capable of receiving a vibration indicative signal from the vibration sensor; and vibration signal processor capable of modifying the vibration indicative signal by applying compensation in order to improve the response of head positioning; vibration signal receiver capable of receiving a vibration indicative signal from the vibration sensor; and vibration signal processor capable of modifying the vibration indicative signal by applying prediction in order to improve the response of head positioning; generating a signal that precludes variations in the drive current to the electromagnetic head when the sensed vibration exceeds a pre-established rate of change.

***Response to Arguments***

Applicant's arguments, see page 10, and the declaration, see pages 1-8, filed 7/03/2006, with respect to the rejection(s) of claims 1-3, 8, 10-12, 17, 19-21, 26, 28-30, and 35 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view Chliwnyj and Nagasawa. Claims 1-3, 8, 10-12, 17, 19-21, 26, 28-30, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chliwnyj and Nagasawa.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason C. Olson whose telephone number is (571)272-7560. The examiner can normally be reached on Monday thru Thursday 7:30-5:30; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

**WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER**

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCO  
August 21, 2006



WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER